Amendments to the Claims

Claim 1 (Cancelled)

Claim 2 (Previously Presented): A nucleic acid molecule according to claim 30 wherein the polylinker is inserted in place of all the nucleic acid sequences encoding reductive domains and which are naturally included in said extension module.

Claim 3 (Previously Presented): A nucleic acid according to claim 30, wherein said polylinker region connects a nucleic acid sequence encoding at least part of an acyl transferase domain to a nucleic acid sequence encoding at least part of an acyl carrier protein domain.

Claim 4 (Previously Presented): A nucleic acid molecule according to claim 30 wherein at least one of the restriction sites included in the polylinker is absent from the Type I polyketide synthase-encoding nucleic acid.

Claim 5 (Cancelled)

Claim 6 (Previously Presented): A nucleic acid molecule according to claim 30 wherein the polylinker includes at least one of the following restriction sites: AvrII; BglII; SnaBI; PstI; SpeI; NsiI; Bsu36I; NheI; and HpaI.

Claim 7 (Previously Presented): A nucleic acid molecule according to claim 30 which additionally encodes a loading module.

Claim 8 (Previously Presented): A nucleic acid molecule according to claim 30 which additionally encodes one or more further extension modules.

Claim 9 (Previously Presented): A nucleic acid molecule according to claim 30 further including a nucleic acid sequence incorporated into the polylinker, which incorporated nucleic acid encodes one or more replacement reductive domains, said one or more replacement reductive domains being selected from the group consisting of a β-ketoreductase (KR) domain, a dehydratase (DH) domain and an enoyl reductase (ER) domain.

Claim 10 (Cancelled)

Claim 11 (Currently Amended): A nucleic acid molecule according to claim ~~10~~ 9 wherein said one or more replacement reductive domains include(s) at least a β-ketoreductase (KR).

Claim 12 (Currently Amended): A nucleic acid molecule according to claim ~~10~~ 9 wherein at least one of said one or more replacement reductive domains is from a different extension module of said Type I polyketide synthase.

Claim 13 (Currently Amended): A nucleic acid molecule according to claim ~~10~~ 9 wherein at least one of said one or more reductive domains is from a different polyketide synthase.

Claim 14 (Previously Presented): A vector including a nucleic acid as defined in claim 30.

Claim 15 (Previously Presented): A host cell transfected, transformed or conjugated with a nucleic acid as defined in claim 30.

Claim 16 (Original): A host cell according to claim 15 which is a cell of a *Streptomyces* species.

Claim 17 (Original): A host cell according to claim 16 which is a cell of *S. erythraea* or *S. avermitilis*.

Claim 18 (Currently Amended): A method for producing a nucleic acid encoding a novel polyketide synthase, the method including the steps of:

i. providing a nucleic acid molecule as defined in claim 30; and

ii. incorporating into said polylinker a nucleic acid sequence which encodes at least one replacement reductive domain, said at least one replacement reductive domains being selected from the group consisting of a β-ketoreductase (KR) domain, a dehydratase (DH) domain and an enoyl reductase (ER) domain.

Claim 19 (Cancelled)

Claims 20 (Original): A method for producing a fermentation product containing a polyketide, the method including the step of culturing a host cell as defined in claim 15.

Claims 21-23 (Cancelled)

Claim 24 (Previously Presented): A method for producing a polyketide, the method including the steps of:

i. providing a fermentation product resulting from the method of claim 20; and

ii. at least partially purifying a polyketide from said fermentation product.

Claim 25 (Original): A method according to claim 24 wherein the polyketide is an avermectin.

Claim 26 (Previously Presented): A method according to claim

25 wherein the avermectin is a B_1 avermectin.

Claim 27 (Cancelled)

Claim 28 (Previously Presented): A host cell transfected, transformed or conjugated with a vector as defined in claim 14.

Claim 29 (Currently Amended): A method according to claim 26, wherein the fermentation product of step (i) is substantially free of B_2 avermectins and wherein the recombinant nucleic acid molecule encoding the Type I polyketide synthase is a nucleic acid molecule encoding an avermectin polyketide synthase except that the ketoreductase domain of module 2 has been replaced with the ketoreductase domain and the dehydratase domain of module 10 of the rapamycin polyketide synthase.

Claim 30 (Previously Presented): An isolated recombinant nucleic acid molecule encoding a Type I polyketide synthase (PKS) wherein said nucleic acid molecule is produced by:

a) providing a polynucleotide encoding at least an extension module of a PKS wherein said extension module contains at least one reductive domain;

b) deleting a portion of the polynucleotide which corresponds to said at least one reductive domain of said PKS; and

c) replacing said deleted portion with a polylinker region having multiple restriction enzyme sites;

wherein said deleted portion corresponding to said at least one reductive domain is at least one domain selected from the group consisting of: a β-ketoreductase (KR) domain, a dehydratase (DH) domain and an enoyl reductase (ER) domain; wherein said polylinker is an in-frame addition to the PKS; and wherein said polylinker encodes a polypeptide.

Claim 31 (Previously Presented): An isolated or recombinant nucleic acid according to claim 30, wherein the polylinker region comprises the sequence of SEQ ID NO: 56.

Claim 32 (Previously Presented): An isolated or recombinant nucleic acid according to claim 30, wherein the polylinker region is selected from the group of polylinkers in plasmids pJLK114 and pJLK117.